

## CONTENTS

<i>Special issue: In honour of Professor John Grant Buchanan on the occasion of his 65th birthday</i> Professor John Grant Buchanan . . . . .	vi
N.m.r. studies of the flexibility of the glycosyl ring in thymidine and uridine nucleosides N. Hicks, O. W. Howarth, and D. W. Hutchinson (Coventry, Gt. Britain) . . . . .	1
The crystallographic conformations of 7,8-dideoxy-1,2:3,4-di- <i>O</i> -isopropylidene- $\alpha$ -D-glycero-D-galacto- and - $\beta$ -L-glycero-D-galacto-oct-7-enopyranose J. C. Barnes and J. S. Brimacombe (Dundee, Gt. Britain) . . . . .	11
Syntheses of $\beta$ -iodourea derivatives of carbohydrates and glycosylamino-oxazolines J. M. Garcia Fernandez, C. Ortiz Mellet, M. A. Pradera Adrian, and J. Fuentes Mota (Seville, Spain) . . . . .	21
Transformations of unsaturated acyclic sugars into enantiomerically pure norbornene derivatives D. Horton and T. Usui (Columbus, OH, U.S.A.) . . . . .	33
Synthesis of optically pure di- to tetra-substituted cyclopentanes from sugar-derived norbornene derivatives D. Horton and T. Usui (Columbus, OH, U.S.A.) . . . . .	51
2,3-Didehydro-2-deoxysialic acids structurally varied at C-5 and their behaviour towards the sialidase from <i>Vibrio cholerae</i> E. Schreiner, E. Zbiral (Vienna, Austria), R. G. Kleineidam, and R. Schauer (Kiel, F.R.G.) . . . . .	61
The synthesis of antibody binding-site probes: a hexasaccharide and two pentasaccharides related to the <i>Brucella</i> A antigen and prepared by <i>in situ</i> activation of thioglycosides with bromine J. Kihlberg and D. R. Bundle (Ottawa, Ont., Canada) . . . . .	67
Synthesis of some trideoxy-D-hexoses and derivatives thereof from D-glucono-1,5-lactone H. Regeling and G. J. F. Chittenden (Nijmegen, The Netherlands) . . . . .	79
Syntheses and reactions of saturated and 2,3-unsaturated vinyl and 1'-substituted-vinyl glycosides A. de Raadt and R. J. Ferrier (Wellington, New Zealand) . . . . .	93
Synthesis of 4- and 5-amino-1-(2-deoxy-D-erythro-pentofuranosyl)imidazole nucleosides by chemical and biotransformation methods D. F. Ewing (Hull, Gt. Britain), A. Holý, I. Votruba (Prague, Czechoslovakia), R. W. Humble, G. Mackenzie, F. Hewedi (Hull, Gt. Britain), and G. Shaw (Bradford, Gt. Britain) . . . . .	109
Synthesis of derivatives of 5-thio-L-idose N. A. Hughes, N. M. Munkombwe, and N. D. Todhunter (Newcastle upon Tyne, Gt. Britain) . . . . .	119
Synthesis and duplex stability of oligonucleotides containing adenine-guanine analogues D. M. Brown and P. Kong Thoo Lin (Cambridge, Gt. Britain) . . . . .	129

Steric and electronic effects in the formation of dihexulose dianhydrides. Reaction of racemic sorbose in anhydrous hydrogen fluoride and a facile synthesis of D-sorbose K. Bock, C. Pedersen (Lyngby, Denmark), J. Defaye, and A. Gabelle (Grenoble, France)	141
Synthesis and evaluation in asymmetric hydrogenation of carbohydrate-derived 1,3-bisphosphines C. Li, B. Bernet, A. Vasella (Zürich, Switzerland), E. A. Broger, and A. Meili (Basel, Switzerland)	149
A new type of anhydro sugar: 1,3 <sup>1</sup> -anhydro-3-C-hydroxymethylaldoses S. J. Angyal (Kensington, N.S.W., Australia)	171
Synthesis of 1-(3-azido-2,3-dideoxy- $\beta$ -D-allofuranosyl)thymine, 1-(2,3-dideoxy- $\beta$ -D-allofuranosyl)-thymine, and 1-(2,3-dideoxy- $\beta$ -D-erythro-hex-2-enofuranosyl)thymine H. Hřebabec̃k̃y and A. Holý (Prague, Czechoslovakia)	179
Synthesis of an artificial antigen that corresponds to a disaccharide repeating unit of the capsular polysaccharide of <i>Haemophilus influenzae</i> type d. A facile synthesis of methyl 2-acetamido-2-deoxy- $\beta$ -D-mannopyranoside B. Classon, P. J. Garegg, S. Oscarson, and A.-K. Tidén (Stockholm, Sweden)	187
The allylation of dibutylstannylene derivatives of myo-inositol T. Desai, J. Gigg, R. Gigg, S. Payne, S. Penades, and H. J. Rogers (London, Gt. Britain)	197
Stereoselective total synthesis of glycopeptides bearing the dimeric and trimeric sialosyl-Tn epitope Y. Nakahara, H. Iijima, S. Shibayama, and T. Ogawa (Wako, Japan)	211
Synthesis of 2-deoxy-4-O- $\alpha$ - and - $\beta$ -D-mannopyranosyl-L-erythro-pentonic acids P. Szabó and L. Szabó (Châtenay-Malabry, France)	227
An improved synthesis of benzyl 3,5-di-O-benzyl-2-deoxy-1,4-dithio-D-erythro-pentofuranoside, an intermediate in the synthesis of 4'-thionucleosides M. R. Dyson, P. L. Coe, and R. T. Walker (Birmingham, Gt. Britain)	237
Preparation of new acylated derivatives of L-arabinofuranose and 2-deoxy-L-erythro-pentofuranose as precursors for the synthesis of L-pentofuranosyl nucleosides C. Genu-Dellac, G. Gosselin, and J.-L. Imbach (Montpellier, France)	249
Synthesis of 2'-thioadenosine J. H. Marriott, M. Mottahedeh, and C. B. Reese (London, Gt. Britain)	257
Thio and epidithio derivatives of methyl $\beta$ -lactoside M. A. Ali, L. Hough, and A. C. Richardson (London, Gt. Britain)	271
Synthese von Teilstrukturen der N-glycoproteine des komplexen Typs H. Paulsen and B. Helpap (Hamburg, Germany)	289
The synthesis of oligonucleotides that contain 2,4-dinitrophenyl reporter groups D. W. Will, C. E. Pritchard, and T. Brown (Edinburgh, Gt. Britain)	315
Application of n-pentenyl glycosides in the regio- and stereo-controlled synthesis of $\alpha$ -linked N-glycopeptides A. J. Ratcliffe, P. Konradsson, and B. Fraser Reid (Durham, NC, U.S.A.)	323
Synthesis of allyl glycosides for conversion into neoglycoproteins bearing epitopes of mycobacterial glycolipid antigens G. O. Aspinall, A. M. Crane, D. W. Gammon, I. H. Ibrahim, N. K. Khare (Toronto, Ont., Canada), D. Chatterjee, B. Rivoire, and P. J. Brennan (Fort Collins, CO, U.S.A.)	337

Structure of the glycopeptidolipid antigen of serovar 20 of the <i>Mycobacterium avium</i> serocomplex, synthesis of allyl glycosides of the outer di- and tri-saccharide units of the antigens of serovars 14 and 20, and serology of the derived neoglycoproteins G. O. Aspinall, N. K. Khare, R. K. Sood (Toronto, Ont., Canada), D. Chatterjee, B. Rivoire, and P. J. Brennan (Fort Collins, CO, U.S.A.)	357
A novel type of spiroketalisation on pyranoses A. Haudrechy and P. Sinaÿ (Paris, France)	375
Synthesis of carbohydrate-amino acid conjugates related to the capsular antigen K54 from <i>Escherichia coli</i> O6:K54:H10 and artificial antigens therefrom A. Ya. Chernyak, L. O. Kononov, and N. K. Kochetkov (Moscow, U.S.S.R.)	381
Stereospecific synthesis of branched-chain sugars by a novel aldol-type cyclocondensation M.-J. Pérez-Pérez, M.-J. Camarasa, A. Díaz-Ortiz, A. S. Félix, F. G. de las Heras (Madrid, Spain)	399
Preparation of dioxolane-type fluoren-9-ylidene acetals of carbohydrates and their hydrogenolysis with $\text{AlCl}_3$ to give axial fluoren-9-yl ethers J. Hajkó, A. Borbás, A. Lipták (Debrecen, Hungary), and M. Kajtár-Peredy (Budapest, Hungary)	413
Synthesis and properties of 5,6-dichlorobenzimidazole 2'→5'- and 3'→5'-nucleotide dimers and trimers K. Ruf and W. Pfeleiderer (Konstanz, Germany)	421
Acyclic analogues of pyrazofurin: syntheses and antiviral evaluation R. N. Comber, R. J. Gray, and J. A. Secrist III (Birmingham, AL, U.S.A.)	441
Potentiometric and spectroscopic studies of the binding of copper(II) ions by aminodeoxy derivatives of 1,6-anhydro- $\beta$ -D-glucopyranose M. Jezowska-Bojczuk, H. Kozłowski (Wrocław, Poland), P. Decock (Villeneuve d'Ascq, France), M. Cerny, and T. Trnka (Prague, Czechoslovakia)	453
Cycloaddition of nitrile oxides to 3-O-benzyl-5,6-dideoxy-1,2-O-isopropylidene- $\alpha$ -D-ribo-hex-5-enofuranose A. J. Blake, R. O. Gould, K. E. McGhie, R. M. Paton, D. Reed, I. H. Sadler, and A. A. Young (Edinburgh, Gt. Britain)	461
Approaches to the C-B-A trisaccharide of dihydroacclacinomycin by extending the chain from either side W. Klaffke, D. Springer, and J. Thiem (Hamburg, Germany)	475
Synthesis of methyl 4-acetamido-2,4-dideoxy-D-glycero-D-galacto-octopyranoside, a decarboxy-neuraminic acid analogue T. Maier and R. R. Schmidt (Konstanz, Germany)	483
Structure of the glycocalyx polysaccharide of <i>Pseudomonas fragi</i> ATCC 4973 L. A. S. Parolis, H. Parolis (Grahamstown, South Africa), G. G. S. Dutton, P. Lee Wing, and B. J. Skura (Vancouver, B.C., Canada)	495
The enzymic determination of D-mannitol with mannitol dehydrogenase from <i>Agaricus bisporus</i> S. Berezenko and R. J. Sturgeon (Edinburgh, Gt. Britain)	505
<i>Notes</i>	
A new approach to <i>cis</i> -chrysanthemic acid J. Mann and A. Weymouth-Wilson (Reading, Gt. Britain)	511

A short synthesis of 1,2,3-tris( <i>tert</i> -butyldimethylsilyl)-6,7-dideoxy-6-C-methyl- $\alpha$ -D- <i>gluco</i> -heptofuran-6-enose from D-glucurone M. H. Ali, P. M. Collins, and W. G. Overend (London, Gt. Britain) . . . . .	517
Cyclic polyethers derived from 5,6- <i>O</i> -isopropylidene-L-ascorbic acid A. H. Haines and D. Katrania (Norwich, Gt. Britain) . . . . .	523
<i>Author index</i> . . . . .	ci
<i>Subject index</i> . . . . .	c3
<i>Contents (Vol. 216)</i> . . . . .	xi

